# High-Level Dimensional Metrology Process Map

Curtis W. Brown

National Nuclear Security Agency's Kansas City Plant Honeywell FM&T cbrown@kcp.com

	Who	Date	Time	Size	Subject
*	horst.	03/14/2006	03:48 AM	84,951	Agenda for International Metrology Interoperability Summit (IMIS) 2006
*	John Horst	03/14/2006	03:48 AM	81,615	<ul> <li>Agenda for International Metrology Interoperability Summit. (IMIS) 2006</li> </ul>
*	horst	03/14/2006	03:47 AM	84.946	<ul> <li>Agenda for International Metrology Interoperability Summit (IMIS) 2006</li> </ul>
*	horst	03/14/2006	03:47 AM	84,897	<ul> <li>Agenda for International Metrology Interoperability Summit (IMIS) 2006</li> </ul>
*	horst	03/14/2006	03:47 AM	84,953	Agenda for International Metrology Interoperability Summit (IMIS) 2006
*	John Herst	03/14/2006	03:47:AM	81,665	Agenda for International Metrology Interoperability Summit (IMIS) 2006
*	Norat	03/14/2006	03:47 AM	84,957	Agenda for International Metrology Interoperability Summit (IMIS) 2006
*	horst	03/14/2006	03:47 AM	84,903	<ul> <li>Agenda for International Metrology Interoperability Summit (IMIS) 2008</li> </ul>
*	John Horst	03/14/2006	03:47 AM	81,615	Agenda for International Metrology Interoperability Summit (IMIS) 2006
*	John Horst	03/14/2006	03:47.AM	81,887	Agenda for International Metrology Interoperability Summit (IMIS) 2006
*	John Horst	03/14/2006	03:47 AM	81,380	<ul> <li>Agenda for International Metrology Interoperability Summit (IMIS) 2006</li> </ul>
*	John Horst	03/14/2008	03:47 AM	91,841	<ul> <li>Agenda for International Metrology Interoperability Summit (IMIS) 2888</li> </ul>
*	horst	03/14/2006	03:47 AM	84,906	<ul> <li>Agenda for International Metrology Interoperability Summit (IMIS) 2006</li> </ul>
*	John Horst	03/14/2006	03:47 AM	81,635	Agenda for International Metrology Interoperability Summit (IMIS) 2006
*	horst.	03/14/2006	03:47 AM	84,901	<ul> <li>Agenda for International Metrology Interoperability Summit (IMIS) 2006</li> </ul>
*	horst	03/14/2006	03:47 AM	85,041	<ul> <li>Agenda for International Metrology Interoperability Summit (IMIS) 2006</li> </ul>
	herat	03/14/2006	03:47 AM	84,899	Agenda for International Metrology Interoperability Summit (IMIS) 2006
*	horst	03/14/2006	03:47 AM	84,903	Agenda for International Metrology Interoperability Summit (IMIS) 2006
*	John Horst	03/14/2006	03.47 AM	81,886	Agenda for International Metrology Interoperability Summit (IMIS) 2006
*	John Horst	03/14/2006	03:47 AM	81,841	<ul> <li>Agenda for International Metrology Interoperability Summit (IMIS) 2006</li> </ul>
*	John Horst	03/14/2006	03:47 AM	81.831	Agenda for International Metrology Interoperability Summit (IMIS) 2006
*	John Horst	03/14/2006	03.47.AM	81,841	Agenda for International Metrology Interoperability Summit (IMIS) 2006
*	horat	03/14/2006	03:46 AM	84,901	Agenda for International Metrology Interoperability Summit (IMIS) 2006
*	John Horst	03/14/2006	03:46 AM	81,831	<ul> <li>Agenda for International Metrology Interoperability Summit (IMIS) 2006</li> </ul>
	John Horst	03/14/2006	03:46 AM	81,890	Agenda for International Metrology Interoperability Summit. (IMIS) 2006
*	John Horst	03/14/2006	03.46 AM	81,637	Agenda for International Metrology Interoperability Summit (IMIS) 2006
*	horat	03/14/2006	03:46 AM	84,905	Agenda for International Metrology Interoperability Summit (IMIS) 2006
*	John Horst	03/14/2006	03:48 AM	81,839	<ul> <li>Agenda for International Metrology Interoperability Summit (IMIS) 2006</li> </ul>
*	John Hesst	03/14/2006	03:46 AM	81,841	<ul> <li>Agenda for International Metrology Interoperability Summit (IMIS) 2006</li> </ul>
	horst	03/14/2006	03:48 AM	84,951	Agenda for International Metrology Interoperability Summit (IMIS) 2006
*	John Horst	03/14/2006	03:48 AM	81,615	<ul> <li>Agenda for International Metrology Interoperability Summit (IMIS) 2006</li> </ul>
*	horat	03/14/2006	03:47 AM	84,946	The state of the s
*	herst	03/14/2006	03:47.AM	84,897	
		A Committee of the		Contract of the Contract of th	

#### SPAMHAUS' 10 Worst Spammers

as of 21 March 2006

www.spamhaus.org/statistics/spammers.lasso

Up to 80% of spam targeted at Internet users in North America and Europe is generated by a hard-core group of known professional spammers whose names, aliases and operations are documented in Spamhaus' Register Of Known Spam Operations (ROKSO) database.

This TOP 10 chart of ROKSO-listed spammers is based on those Spamhaus views as the highest threat, the worst of the career spammers causing the most damage on the Internet currently. Spamhaus flags these as a priority for Law Enforcement Agencies.

The world's worst spammers and spam gangs this week are:

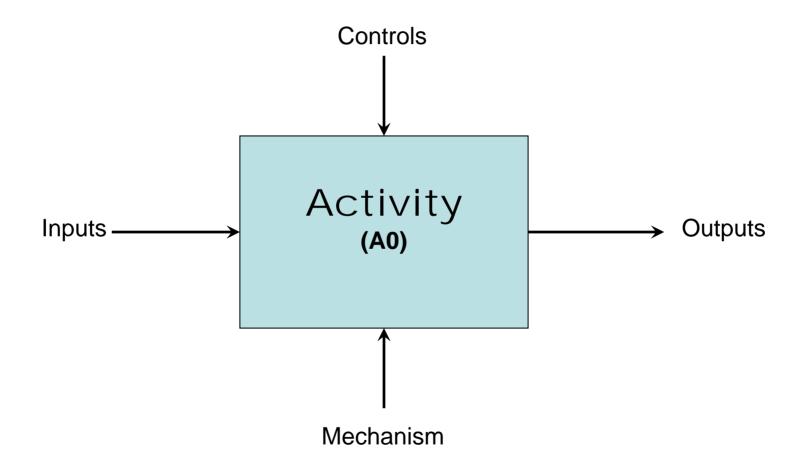
### SPAMHAUS' 10 Worst Spammers

Rank	Photo	Spammer or Spam Gang	Country
1	R	Alex Blood / Alexander Mosh / AlekseyB / Alex Polyakov So many Alex's/Alexey's. Alex "Blood" tied to Pilot Holding & bbasafehosting.com long ago. Then Alex Polyakov posted he owned them. Massive botnet and child-porn spam ring. May be part of of same as Pavka/Artofit & Leo Kuvayev spam gangs.	Ukraine
2	3	Michael Lindsay / iMedia Networks Lindsay's iMedia Networks is a full-fledged criminal spam-hosting operation serving well known ROKSO- listed spammers. They sell "spammer hosting" at high premiums.	<b>United States</b> California
3		Leo Kuvayev / BadCow Russian/American spammer. Does "OEM CD" pirated software spam, illegal pharmaceuticals, porn spam, porn payment collection, etc. Spams using virus infected PCs that it is assumed his gang create.	Russia
4		Pavka / Artofit  A Russian gang who have been spamming for years.  Started with porn, now into many types of spam, always via hijacked PCs. Part of a large criminal group involving ROKSO spammers Leo Kuvayev & Alex Blood.	Russia
5		Alexey Panov - ckync.com  Spamming, spammer hosting, spamware peddlers.  Author of the DMS spamware that uses hijacked open proxies and virus infected PC to flood the world with spam.	Russia

### SPAMHAUS' 10 Worst Spammers

Rank	Photo	Spammer or Spam Gang	Country
6		Jeffrey Peters - JTel / CPU Solutions Convicted felon, hard-core spammer host, Peters is also behind a fake Russian "ISP" serving many criminal ROKSO spammers. Forged documents seem to be among his specialties.	<b>United States</b> Florida
7	N	Amichai Inbar Full scale criminal operation. Spamming porn, illegal drugs and pump-&-dump stock using botnets. Partnered with many of the worst US and Russian ROKSO spammers.	Israel
8	1	Ruslan Ibragimov / send-safe.com  Stealth spamware creator. One of the larger criminal spamming operations around. Runs a CGI mailer on machines in Russia and uses hijacked open proxies and virus infected PCs to flood the world with spam.	Russia
9		Tim Govetche / Bulkers.net / Bulkbarn.com Long time operator of Bulkbarn.com "secret" spammer chat forum. Behind a lot of the criminal method spamming that goes on in the world. Caught in 2005 spamming "pump & dump" stock scams.	Canada Nova Scotia
10		John Horst A recent new addition to the list. He is known to deluge many mail boxes of leaders in metrology under the guise of a invitation for the International Metrology Interoperability Summit.	<b>United States</b> Maryland

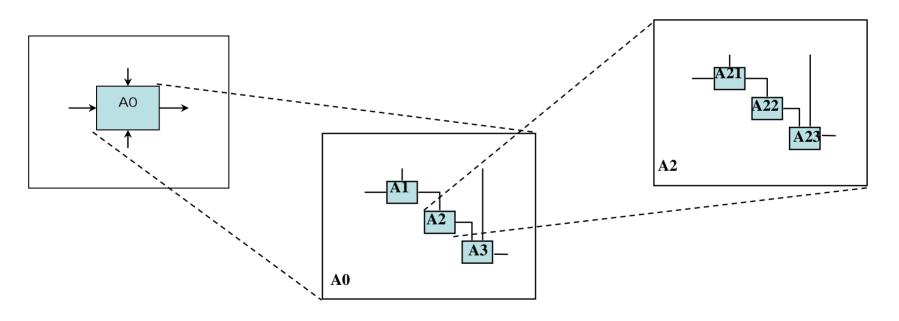
### Application Activity Model Identifies Activities and Interfaces



Used to aid in understanding the scope and information requirements for an application

## Application Activity Model Activity Decomposition

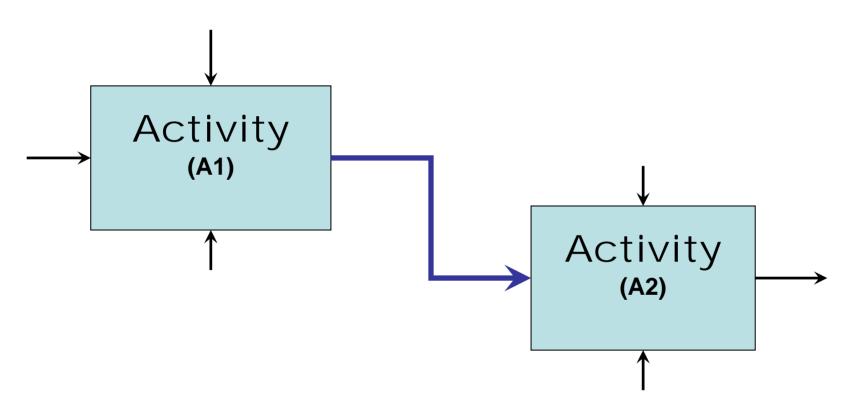
 Each activity may be decomposed to provide more detail.



Top most box subdivides into sub-activities on another diagram.

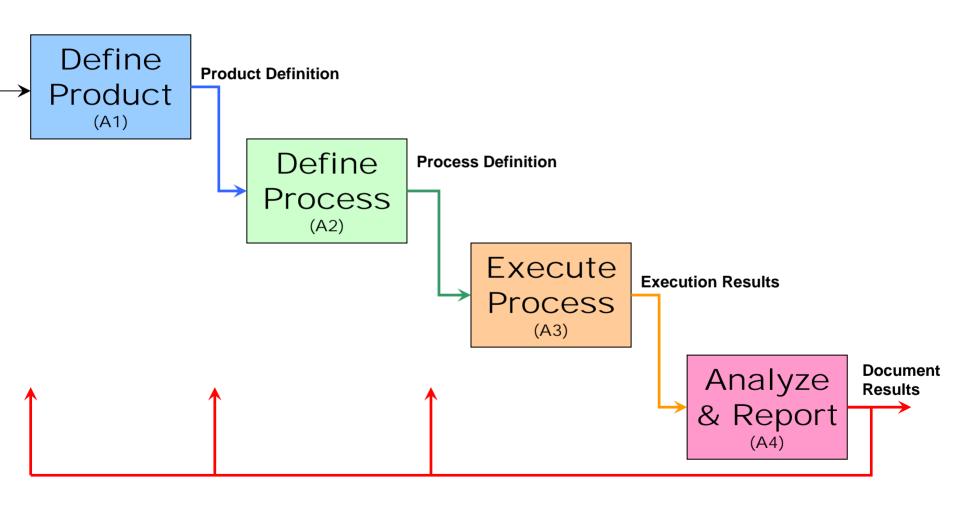
#### **Application Activity Model**

Input => Output =? Interface

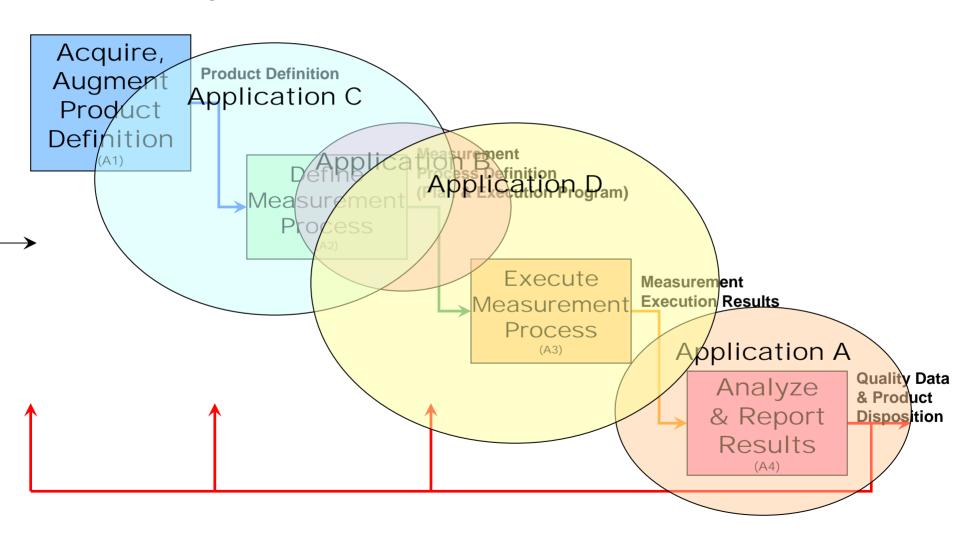


Where an activity's output is an input for another activity, then we have a candidate interface!

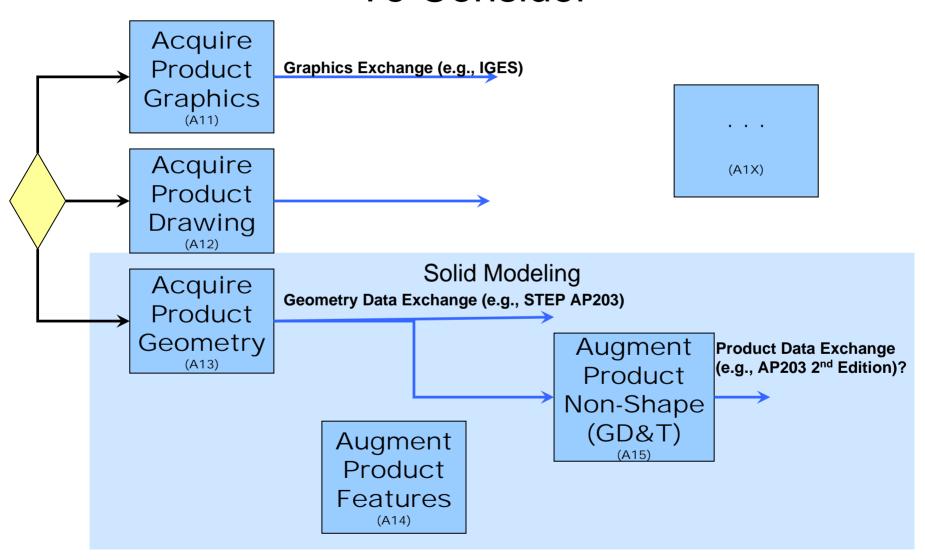
### A General Process Map Top-Level Activities with Interfaces



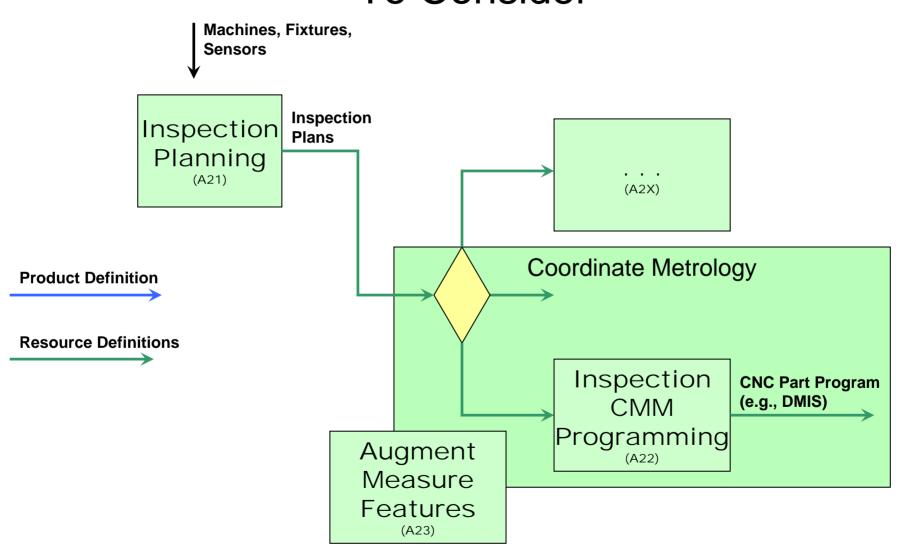
### Digital Dimensional Metrology Top-Level Activities with Interfaces



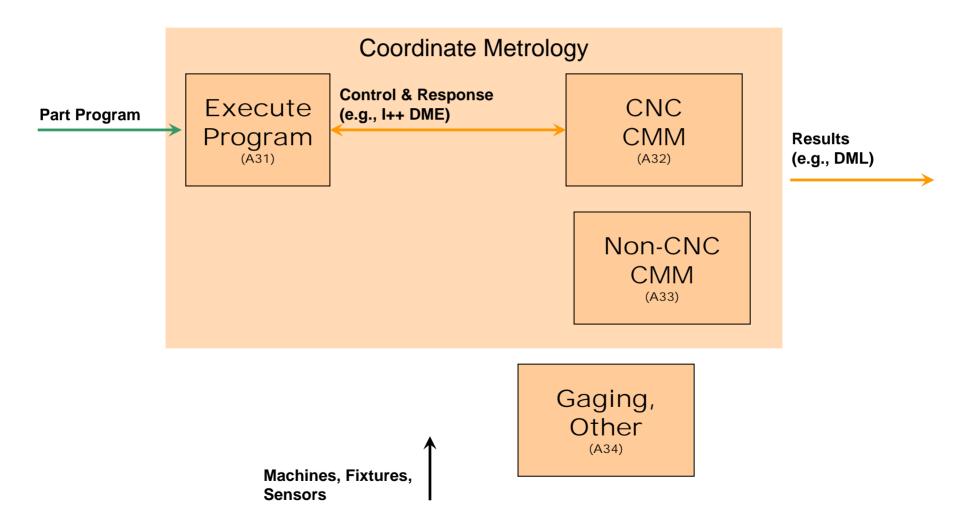
### Acquire / Augment Product Definition To Consider



## Define Measurement Process To Consider



## Execute Measurement Process To Consider



### Analyze and Report Results To Consider

Analyze Results

Results (e.g., DML)

Report Results

Determine Measurement Uncertainty Determine Product Disposition

(A45)

Product Disposition

Prepare Feedback

### Dimensional Metrology System:

Component diagram with candidate open & non-proprietary interface standards

#### Design

Inspection

#### Planning Execution Analysis



Part geometry and design tolerances STEP

4*P*:219.

process planning P203e2

Inspection process plans

DMIS

**Inspection** execution

Measurement results DML:

STEP AP219

CMM control commands and responses

I++ DME

**Coordinate** measuring machines (CMMs)

Reporting & analysis

> Quality measurement information

AIAG Quality Data

Quality device integration



### Who is driving your business?

"If you are not using open & non-proprietary standards, then you are not driving your business, your vendors are."



Glen Allan, Ford